

## AMENDMENT

Please amend the specification to read as set forth below (clean copies of the amended claims are presented below while marked-up versions of the amended claims are included on a separate attachment per 37 C.F.R. § 1.121):

Please replace the first full paragraph on page 2, beginning line 2, with the following paragraph:

A1  
A particularly rich source of mannans is the hemicellulose content of softwood, and in particular, the waste material from softwood processing in paper manufacturing. One of the more important hemicelluloses in softwood is galactoglucomannan, which is composed of a backbone of  $\beta$ -(1,4)-linked D-mannopyranose and D-glucopyranose in a ratio of approximately 3:1, respectively (Sjostrom, E. (1992) Wood Chemistry, 2nd Ed., Academic Press: New York, NY, pp 63-70). Other sources of mannans include the endosperm of copra and ivory palm nuts, guar beans, coffee beans, and roots of konjak (*Amorphorphallus konjac*).

Please replace the third full paragraph on page 13, beginning line 21, with the following paragraph:

A2  
"Thermal tolerant" refers to the property of withstanding partial or complete inactivation by heat and can also be described as thermal resistance or thermal stability. Although some variation exists in the literature, the following definitions can be considered typical for the optimum temperature range of stability and activity for enzymes: psychrophilic (below freezing to 10°C); mesophilic (10°C to 50°C); thermophilic (50°C to 75°C); and caldophilic (75°C to above boiling water temperature). The stability and catalytic activity of enzymes are linked characteristics, and the ways of measuring these properties vary considerably. For industrial enzymes, stability and activity are best measured under use conditions, often in the presence of substrate. Therefore, mannanases that must act on process streams of mannans must be able to withstand exposure up to thermophilic or even caldophilic temperatures for digestion times in excess of several hours.

Please replace the first full paragraph on page 16, beginning line 2, with the following paragraph:

A3  
Mannanases are characterized by having a multiple domain unit within their overall structure; a GH or catalytic domain is joined to a carbohydrate binding type II and III